

CLAIMS:

1. A method of denominating a currency bill printed using magnetic zone printing as belonging to one of a plurality of recognizable denominations using a currency evaluation device, each of the recognizable denominations having a unique magnetic zone printing configuration, comprising:

receiving a stack of bills in an input receptacle of the currency evaluation device, the bills being rectangular and having a long dimension and a narrow dimension;

transporting the bills, one at a time, along a transport direction from the input receptacle past a plurality of magnetic sensors, transporting the bills with their narrow dimension parallel to the transport direction;

detecting the presence or absence of magnetic ink in a plurality of zones on a currency bill under the control of a currency denominating device, said plurality of zones being selected to provide information sufficient to discriminate among the plurality of recognizable denominations based on the presence or absence of magnetic ink in said zones; and

denominating said currency bill as belonging to one of the plurality of recognizable denominations under the control of said currency denominating device by comparing the detected information concerning which zones contained magnetic ink and which zones did not contain magnetic ink to master information stored by said currency denominating device defining for each of the recognizable denominations the zones in which magnetic ink is expected and the zones in which magnetic ink is not expected.

2. The method of claim 1 wherein the plurality of magnetic sensors are closely spaced and linearly aligned.

3. The method of claim 2 wherein the scanhead is disposed transverse to the document transport path.

4. The method of claim 2 wherein the spacing between each of the plurality of magnetic sensors is about one millimeter.

5. The method of claim 2 wherein the spacing between each of the plurality of sensors is less than about one millimeter.

5 6. The method of claim 1 wherein the bills are denominated at a rate of at least 800 bills per minute.

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7. A currency evaluation device for receiving a stack of currency bills and rapidly evaluating all the bills in the stack, the device comprising:

an input receptacle for receiving a stack of bills to be evaluated;

10 at least one output receptacle for receiving the bills after each of the bills have been evaluated;

a transport mechanism for transporting the bills, one at a time, from the input receptacle to the at least one output receptacle along a transport path;

15 a magnetic scanhead disposed adjacent to the transport path, the scanhead including a plurality of closely spaced magnetic sensors each adapted to detect the presence of a security thread within the bills, the scanhead being adapted to determine the location of the security thread within the bill;

a memory adapted to store master security thread location information corresponding to a plurality of denominations of currency bills; and

20 an evaluating unit adapted to determine the denomination of the currency bill when the determined security thread location favorably compares to the master security thread location information, the evaluating unit being adapted to generate an error signal when the determined security thread location does not favorably compare to master security thread location information.

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8. The currency evaluation device of claim 7 wherein the plurality of sensors are linearly aligned within the scanhead.

9. The currency evaluation device of claim 8 wherein scanhead is disposed
30 transverse to the document transport path.

10. The currency evaluation device of claim 9 wherein the spacing between each of the plurality of sensors is about one millimeter.

11. The currency evaluation device of claim 9 wherein the spacing between each of the plurality of sensors is less than about one millimeter.

12. The currency evaluation device of claim 7 wherein the transport mechanism is adapted to transport each of the bills such that a long edge of the bill is the leading edge of the bill.

13. The currency evaluation device of claim 7 wherein the bills are evaluated at a rate of at least 800 bills per minute.

14. A currency evaluation device for receiving a stack of currency bills and rapidly evaluating all the bills in the stack, the device comprising:

an input receptacle for receiving a stack of bills to be evaluated;

at least one output receptacle for receiving the bills after each of the bills have been evaluated;

a transport mechanism for transporting the bills, one at a time, from the input receptacle to the at least one output receptacle along a transport path;

a magnetic scanhead disposed adjacent to the transport path, the scanhead including a plurality of closely spaced magnetic sensors, each of the magnetic sensors being adapted to detect magnetic zone printing configuration information from each of the currency bills, each of the magnetic sensors adapted to detect the presence of a security thread within each of the bills, the magnetic scanhead being adapted to determine the location of a detected security thread within a currency bill;

a memory adapted to store master magnetic zone printing configuration information and master security thread location information; and

an evaluating unit adapted to determine the denomination of each of the bills by comparing the detected magnetic zone printing configuration information to the stored master magnetic zone printing configuration information, the evaluating unit being adapted to authenticate each of the currency bills by comparing the determined security thread location to the stored master security thread location information.

15. The currency evaluation device of claim 14 wherein the plurality of sensors are linearly aligned within the scanhead.

16. The currency evaluation device of claim 15 wherein scanhead is disposed transverse to the document transport path.

17. The currency evaluation device of claim 16 wherein the spacing between each of the plurality of sensors is about one millimeter.

18. The currency evaluation device of claim 16 wherein the spacing between each of the plurality of sensors is less than about one millimeter.

19. The currency evaluation device of claim 14 wherein the transport mechanism is adapted to transport each of the bills such that a long edge of the bill is the leading edge of the bill.

20. The currency evaluation device of claim 14 wherein the bills are evaluated at a rate of at least 800 bills per minute.

21. A currency evaluation device for evaluating different types of currency bills including currency from different counties:

an input receptacle for receiving a stack of bills to be evaluated;

at least one output receptacle for receiving the bills after each of the bills have been evaluated;

a transport mechanism for transporting the bills, one at a time, from the input receptacle to the at least one output receptacle along a transport path;

a magnetic scanhead disposed adjacent to the transport path, the scanhead including a plurality of closely spaced magnetic sensors, each of the magnetic sensors being adapted to detect the presence of a security thread within each of the bills, the magnetic scanhead being adapted to determine the location of the detected security thread within a bill;

a memory adapted to store a plurality of master security thread information corresponding to a plurality of types of currency, the master security thread information defining a predetermined number of security thread locations for each of the plurality of currency types, the predetermined number corresponding to the number of denominations of bills in a particular currency type; and

an evaluating unit adapted to evaluate each of the bills by comparing the determined security thread location to the master security thread location information corresponding to the type of currency, the evaluating unit being adapted to generate an error signal when the determined security thread location information does not favorably compare to one of the security locations for the particular currency type specified by the user.

22. The currency evaluation device of claims 21 wherein the evaluating unit is adapted to determine the type of currency being evaluated from among a plurality of currency types, the plurality of currency types corresponding to currency issued by a plurality of countries.

23 The currency evaluation device of claim 21 further comprising a user interface adapted to receive information form a user of the currency evaluation device specifying the type of currency to be processed.

24. The currency evaluation device of claim 21 wherein the plurality of sensors are linearly aligned within the scanhead.

25. The currency evaluation device of claim 24 wherein scanhead is disposed transverse to the document transport path.

26. The currency evaluation device of claim 25 wherein the spacing between each of the plurality of sensors is about one millimeter.

27. The currency evaluation device of claim 25 wherein the spacing between each of the plurality of sensors is less than about one millimeter.

28. The currency evaluation device of claim 21 wherein the transport mechanism is adapted to transport each of the bills such that a long edge of the bill is the leading edge of the bill.

29. The currency evaluation device of claim 21 wherein the bills are evaluated at a rate of at least 800 bills per minute.

30. A method of rapidly evaluating currency bills with a currency evaluation device, the method comprising:

receiving a stack of currency bills in an input receptacle;

transporting each of the bills from the input receptacle, one at a time, past a magnetic scanhead to at least one output receptacle, the magnetic scanhead including a plurality of closely spaced magnetic sensors;

detecting the presence of a security thread disposed within each of the bills with the magnetic scanhead; and

generating an error signal when the presence of a security thread is not detected.

31. The method of claim 30 wherein the plurality of magnetic sensors are linearly aligned within the magnetic scanhead.

32. The method of claim 31 wherein the scanhead is disposed transverse to the document transport path.

33. The method of claim 32 wherein the spacing between each of the plurality of magnetic sensors is about one millimeter.

34. The method of claim 32 wherein the spacing between each of the plurality of sensors is less than about one millimeter.

35. The method of claim 30 wherein transporting each of the bills further comprises transporting each of the bills such that a long edge of the bill is the leading edge of the bill.

36. The method of claim 30 wherein the bills are evaluated at a rate of at least 800 bills per minute.

5 37. A method of rapidly authenticating currency bills with a currency evaluation device, the method comprising:

receiving a stack of currency bills in an input receptacle;

transporting each of the bills from the input receptacle, one at a time, past a magnetic scanhead to at least one output receptacle, the magnetic scanhead including a plurality of closely spaced magnetic sensors;

10 detecting the presence of a security thread disposed within each of the bills with the magnetic scanhead;

determining the location of the detected security thread within each of the bills with the magnetic scanhead; and

15 generating an error signal when the determined security thread location does not favorably compare to master security thread location information stored in a memory of the currency evaluation device.

20 38. The method of claim 37 wherein the plurality of magnetic sensors are linearly aligned within the scanhead.

39. The method of claim 38 wherein the scanhead is disposed transverse to the document transport path.

25 40. The method of claim 38 wherein the spacing between each of the plurality of magnetic sensors is about one millimeter.

41. The method of claim 38 wherein the spacing between each of the plurality of sensors is less than about one millimeter.

30 42. The method of claim 37 wherein transporting each of the bills further comprises transporting each of the bills such that a long edge of the bill is the leading edge of the bill.

43. The method of claim 37 wherein the bills are evaluated at a rate of at least 800 bills per minute.

5 44. A method of rapidly evaluating currency bills with a currency evaluation device, the method comprising:

receiving a stack of currency bills in an input receptacle;

transporting each of the bills from the input receptacle, one at a time, past a magnetic scanhead having a plurality of closely spaced magnetic sensors;

10 detecting magnetic zone printing configuration information from each of the bills with the magnetic scanhead;

detecting the presence of a security thread disposed within each of the bills with the magnetic scanhead;

15 determining the location of the detected security threads within each of the bills;

denominating each of the currency bills by comparing the detected magnetic zone printing configuration information from each of the bills to master magnetic zone printing configuration information stored in a memory of the currency handling device; and

20 authenticating each of the currency bills by comparing the determined location of the detected security thread within each of the bills to master security thread information stored in the memory of the currency handling device.

25 45. The method of claim 44 wherein the plurality of magnetic sensors are linearly aligned within the scanhead.

46. The method of claim 45 wherein the scanhead is disposed transverse to the document transport path.

30 47. The method of claim 46 wherein the spacing between each of the plurality of magnetic sensors is about one millimeter.

48. The method of claim 46 wherein the spacing between each of the plurality of sensors is less than about one millimeter.

49. The method of claim 44 wherein transporting each of the bills further comprises transporting each of the bills such that a long edge of the bill is the leading edge of the bill.

50. The method of claim 44 wherein the bills are evaluated at a rate of at least 800 bills per minute.

51. A method of rapidly evaluating currency bills of different types including currency bills from different countries with a currency evaluation device, the method comprising:

receiving a stack of a particular type of currency bills in an input receptacle;

transporting each of the bills from the input receptacle, one at a time, past a magnetic scanhead having a plurality of closely spaced magnetic sensors;

determining the type of currency being evaluated from among a plurality of currency types, the plurality of currency types corresponding to currency issued by a plurality of countries;

detecting the presence of a security thread disposed within each of the bills with the magnetic scanhead;

determining the location of the detected security thread within each of the bills;

evaluating each of the currency bills by comparing the determined security thread location to master security thread location information corresponding to a plurality of types of currency bills, the master security thread information defining a predetermined number of security thread locations for each of the plurality of currency types, the predetermined number corresponding to the number of denominations of bills in a particular currency type; and

generating an error signal when the determined security thread location information does not favorably compare one of the security locations for the particular currency type specified by the user.

52. The method of claim 51 wherein the plurality of magnetic sensors are linearly aligned within the scanhead.

53. The method of claim 52 wherein the scanhead is disposed transverse to the document transport path.

54. The method of claim 53 wherein the spacing between each of the plurality of magnetic sensors is about one millimeter.

55. The method of claim 53 wherein the spacing between each of the plurality of sensors is less than about one millimeter.

56. The method of claim 51 wherein transporting each of the bills further comprises transporting each of the bills such that a long edge of the bill is the leading edge of the bill.

57. The method of claim 51 wherein the bills are evaluate at a rate of at least 800 bills per minute.

58. A currency evaluation device for receiving a currency bill having a magnetic attribute and evaluating the currency bill, the device comprising:

a magnetic scanhead disposed adjacent to a bill evaluation region, the scanhead including a plurality of closely spaced magnetic sensors each adapted to detect the presence of a magnetic attribute of the bill, the plurality of magnetic sensors covering a substantial portion of a dimension of a bill, the scanhead being adapted to retrieve magnetic characteristic information from the currency bill;

a memory adapted to store master magnetic characteristic information corresponding to a plurality of types of currency bills; and

an evaluating unit adapted to evaluate the currency bill by comparing the retrieved magnetic characteristic information to the stored master magnetic characteristic information, the plurality of magnetic sensors covering a substantial portion of a dimension of a bill, the evaluating unit being adapted to generate an error

signal when the retrieved magnetic characteristic information does not favorably compare to the stored master magnetic characteristic information.

5 59. The currency evaluation device of claim 58 wherein the plurality of sensors are linearly aligned within the scanhead.

60. The currency evaluation device of claim 59 wherein scanhead is disposed transverse to the document transport path.

10 61. The currency evaluation device of claim 60 wherein the spacing between each of the plurality of sensors is less than about five millimeters.

15 62. The currency evaluation device of claim 60 wherein the spacing between each of the plurality of sensors is less than about four millimeters.

63. The currency evaluation device of claim 60 wherein the spacing between each of the plurality of sensors is less than about three millimeters.

20 64. The currency evaluation device of claim 60 wherein the spacing between each of the plurality of sensors is less than about two millimeters.

65. The currency evaluation device of claim 60 wherein the spacing between each of the plurality of sensors is about one millimeter.

25 66. The currency evaluation device of claim 60 wherein the spacing between each of the plurality of sensors is less than about one millimeter.

67. The currency evaluation device of claim 60 wherein the spacing between each of the plurality of sensors is about 0.5 millimeter.

30 68. A document evaluation device comprising:
a magnetic scanhead disposed adjacent to a document evaluation region and adapted to scan a document along a dimension of the document, the scanhead including a plurality of closely spaced magnetic sensors each adapted to detect the

presence of a magnetic attribute of the document, the plurality of magnetic sensors covering a substantial portion of a dimension of a document, the scanhead being adapted to retrieve characteristic magnetic information from the currency document;

a memory adapted to store master magnetic attribute information; and

an evaluating unit adapted to evaluate the document bill by comparing the received characteristic magnetic information to the stored master magnetic characteristic information, the evaluating unit being adapted to generate an error signal when the received characteristic magnetic information does not favorably compare to the stored master magnetic characteristic information.

69. The currency evaluation device of claim 68 wherein the plurality of sensors are linearly aligned within the scanhead.

70. The currency evaluation device of claim 69 wherein scanhead is disposed transverse to the document transport path.

71. The currency evaluation device of claim 70 wherein the spacing between each of the plurality of sensors is less than about five millimeters.

72. The currency evaluation device of claim 70 wherein the spacing between each of the plurality of sensors is less than about four millimeters.

73. The currency evaluation device of claim 70 wherein the spacing between each of the plurality of sensors is less than about three millimeters.

74. The currency evaluation device of claim 70 wherein the spacing between each of the plurality of sensors is less than about two millimeters.

75. The currency evaluation device of claim 70 wherein the spacing between each of the plurality of sensors is about one millimeter.

76. The currency evaluation device of claim 70 wherein the spacing between each of the plurality of sensors is less than about one millimeter.

77. The currency evaluation device of claim 70 wherein the spacing between each of the plurality of sensors is about 0.5 millimeter.

5 78. A currency evaluation device for receiving a currency bill having a magnetic attribute and evaluating the currency bill, the device comprising:
 an inlet for receiving a currency bill to be evaluated;
 an output receptacle for receiving the bill after the bill has been evaluated;
 a transport mechanism for transporting the bill from the inlet to the output
 10 receptacle along a transport path;
 a magnetic scanhead disposed adjacent to the transport path, the scanhead including a plurality of linearly aligned and closely spaced magnetic sensors, the scanhead being adapted to detect the presence of a magnetic attribute of the bill when the magnetic attribute has a leading edge dimension greater than about one millimeter,
 15 the plurality of magnetic sensors covering a substantial portion of a dimension of the bill, the scanhead being adapted to retrieve characteristic magnetic information from the currency bill, the scanhead disposed transverse the transport path;
 a memory adapted to store master magnetic characteristic information corresponding to a plurality of types of currency bills; and
 20 an evaluating unit adapted to evaluate the currency bill by comparing the retrieved magnetic characteristic information to the stored master magnetic characteristic information, the evaluating unit being adapted to generate an error signal when the retrieved characteristic magnetic information does not favorably compare to the stored master magnetic characteristic information.

25 79. The currency evaluation device of claim 78 wherein the plurality of sensors are linearly aligned within the scanhead.

30 80. The currency evaluation device of claim 78 wherein scanhead is disposed transverse to the document transport path.

81. The currency evaluation device of claim 80 wherein the spacing between each of the plurality of sensors is less than about five millimeters.

82. The currency evaluation device of claim 80 wherein the spacing between each of the plurality of sensors is less than about four millimeters.

83. The currency evaluation device of claim 80 wherein the spacing between each of the plurality of sensors is less than about three millimeters.

84. The currency evaluation device of claim 80 wherein the spacing between each of the plurality of sensors is less than about two millimeters.

85. The currency evaluation device of claim 80 wherein the spacing between each of the plurality of sensors is about one millimeter.

86. The currency evaluation device of claim 80 wherein the spacing between each of the plurality of sensors is less than about one millimeter.

87. The currency evaluation device of claim 80 wherein the spacing between each of the plurality of sensors is about 0.5 millimeter.

88. The currency evaluation device of claim 78 wherein the transport mechanism is adapted to transport each of the bills such that a long edge of the bill is the leading edge of the bill.

89. The currency evaluation device of claim 78 wherein the bills are evaluated at a rate of at least 800 bills per minute.

90. A method of rapidly authenticating currency bills with a currency evaluation device, the method comprising:
 receiving a stack of currency bills in an input receptacle;
 transporting each of the bills from the input receptacle, one at a time, past a magnetic scanhead to at least one output receptacle, the magnetic scanhead including a plurality of closely spaced magnetic sensors, the plurality of magnetic sensors covering a substantial portion of a dimension of the bill.

detecting the presence of a magnetic attribute of each of the bills with the magnetic scanhead;

retrieving magnetic characteristic information from each of the bills with the magnetic scanhead; and

5 generating an error signal when the retrieved magnetic characteristic information does not favorably compare to master magnetic characteristic information stored in a memory of the currency evaluation device.

10 91. The method of claim 90 further comprising linearly aligning the plurality of magnetic sensors within the scanhead.

92. The method of claim 91 further comprising disposing the scanhead transverse to the document transport path.

15 93. The method of claim 92 wherein linearly aligning further comprises linearly aligning the plurality of sensors within the scanhead such that the spacing between each of the sensors is less than about five millimeters.

20 94. The method of claim 92 wherein linearly aligning further comprises linearly aligning the plurality of sensors within the scanhead such that the spacing between each of the sensors is less than about four millimeters.

25 95. The method of claim 92 wherein linearly aligning further comprises linearly aligning the plurality of sensors within the scanhead such that the spacing between each of the sensors is less than about three millimeters

30 96. The method of claim 92 wherein linearly aligning further comprises linearly aligning the plurality of sensors within the scanhead such that the spacing between each of the sensors is less than about two millimeters.

97. The method of claim 92 wherein linearly aligning further comprises linearly aligning the plurality of sensors within the scanhead such that the spacing between each of the sensors is about one millimeter.

98. The method of claim 92 wherein linearly aligning further comprises linearly aligning the plurality of sensors within the scanhead such that the spacing between each of the sensors is less than about one millimeter.

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99. The method of claim 92 wherein linearly aligning further comprises linearly aligning the plurality of sensors within the scanhead such that the spacing between each of the sensors is about 0.5 millimeter

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100. The method of claim 90 wherein transporting each of the bills further comprises transporting each of the bills such that a long edge of the bill is the leading edge of the bill.

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101. The method of claim 90 wherein the bills are evaluated at a rate of at least 800 bills per minute.

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102. A magnetic scanhead for a currency evaluation device, the magnetic scanhead comprising at least two closely spaced magnetic sensors each adapted to detect the presence of a magnetic attribute of a currency bill, the scanhead being adapted to scan a substantially continuous segment of a bill along a dimension of the bill, the segment having a width substantially equivalent to a tip-to-tip length of the at least two sensors, the scanhead being adapted to retrieve magnetic characteristic information from the currency bills within the continuous segment.

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103. The magnetic scanhead of claim 102 wherein each of at least two sensors have a length of about 4.5.

104. The magnetic scanhead of claim 102 wherein the spacing between each of the at least two magnetic sensors is less than about one millimeter.

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105. The magnetic scanhead of claim 102 wherein the spacing between each of the at least two magnetic sensors is about one millimeter.

106. The magnetic scanhead of claim 105 wherein the tip-to-tip length of the at least two sensors is about 9.5 millimeters

5 107. The magnetic scanhead of claim 102 wherein the at least two magnetic sensors are linearly aligned within the scanhead.

108. The magnetic scanhead of claim 102 wherein the at least two magnetic sensors comprise sixteen magnetic sensors.

10 109. The magnetic scanhead of claim 108 wherein the tip-to-tip length of the sixteen magnetic sensors is about 79.5 millimeters.

110. The magnetic scanhead of claim 102 wherein at least two magnetic sensors comprise thirty-two magnetic sensors.

15 111. The magnetic scanhead of claim 107 wherein the tip-to-tip length of the thirty-two magnetic sensors is about 159.5 millimeters.

20 112. A sensor arrangement for evaluating currency bills having a magnetic characteristic contained therein, the sensor arrangement comprising a plurality of spaced apart magnetic sensors arranged within a currency evaluating device in a manner such that the plurality of sensors collectively scan a substantially continuous segment of each of the currency bills transported along a bill transport path within the currency evaluating device.

25 113. The sensor arrangement of claim 112 wherein the distance between adjacent magnetic sensors is less than about five millimeters.

30 114. The sensor arrangement of claim 112 wherein the distance between adjacent magnetic sensors is less than about four millimeters.

115. The sensor arrangement of claim 112 wherein the distance between adjacent magnetic sensors is less than about three millimeters.

116. The sensor arrangement of claim 112 wherein the distance between adjacent magnetic sensors is less than about two millimeters.

5 117. The sensor arrangement of claim 112 wherein the distance between adjacent magnetic sensors is about one millimeter.

118. The sensor arrangement of claim 112 wherein the distance between adjacent magnetic sensors is less than about one millimeter.

10 119. The sensor arrangement of claim 112 wherein the distance between adjacent magnetic sensors is less than about 0.5 millimeter.

15 120. The sensor arrangement of claim 112 wherein the substantially continuous segment scanned collectively by the plurality of magnetic sensors has a dimension of at least about 9.5 millimeters in a direction transverse to the bill transport path.

20 121. The sensor arrangement of claim 112 wherein the substantially continuous segment scanned collectively by the plurality of magnetic sensors has a dimension of at least about 29.5 millimeters in a direction transverse to the bill transport path.

25 122. The sensor arrangement of claim 112 wherein the substantially continuous segment scanned collectively by the plurality of magnetic sensors has a dimension of at least about 59.5 millimeters in a direction transverse to the bill transport path.

30 123. The sensor arrangement of claim 112 wherein the substantially continuous segment scanned collectively by the plurality of magnetic sensors has a dimension of at least about 79.5 millimeters in a direction transverse to the bill transport path.

124. The sensor arrangement of claim 112 wherein the substantially continuous segment scanned collectively by the plurality of magnetic sensors has a dimension of at least about 159.5 millimeters in a direction transverse to the bill transport path.

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125. The sensor arrangement of claim 112 wherein the substantially continuous segment scanned collectively by the plurality of magnetic sensors has a dimension of at least about 170 millimeters in a direction transverse to the bill transport path.

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126. The sensor arrangement of claim 112 wherein the plurality of magnetic sensors are positioned in a substantially linear arrangement.

127. The sensor arrangement of claim 126 wherein the substantially linear arrangement is disposed substantially parallel to a long edge of currency bills transported within a currency evaluating device.

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128. The sensor arrangement of claim 126 wherein the linear arrangement is arranged substantially parallel to a leading edge of currency bills transported within the currency evaluating device.

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129. A method of evaluating currency bills having a magnetic characteristic contained therein, the method comprising:

arranging a plurality of magnetic sensors in a spaced apart orientation within a currency evaluating device;

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transporting each of the currency bills along a bill transport path within the currency evaluating device; and

scanning a substantially continuous segment of each of the bills with the plurality of magnetic sensors.

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130. The method claim 129 wherein arranging a plurality of magnetic sensors further comprises spacing each of the magnetic sensors apart from adjacent magnetic sensors by a distance of less than about five millimeters.

131. The method claim 129 wherein arranging a plurality of magnetic sensors further comprises spacing each of the magnetic sensors apart from adjacent magnetic sensors by a distance of less than about four millimeters.

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132. The method claim 129 wherein arranging a plurality of magnetic sensors further comprises spacing each of the magnetic sensors apart from adjacent magnetic sensors by a distance of less than about three millimeters.

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133. The method claim 129 wherein arranging a plurality of magnetic sensors further comprises spacing each of the magnetic sensors apart from adjacent magnetic sensors by a distance of less than about two millimeters.

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134. The method claim 129 wherein arranging a plurality of magnetic sensors further comprises spacing each of the magnetic sensors apart from adjacent magnetic sensors by a distance of about one millimeter.

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135. The method claim 129 wherein arranging a plurality of magnetic sensors further comprises spacing each of the magnetic sensors apart from adjacent magnetic sensors by a distance of less than about one millimeter.

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136. The method claim 129 wherein arranging a plurality of magnetic sensors further comprises spacing each of the magnetic sensors apart from adjacent magnetic sensors by a distance of about 0.5 millimeter.

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137. The method of claim 129 wherein scanning further comprises scanning a substantially continuous segment having a dimension of at least about 9.5 millimeters in a direction transverse to the bill transport path within the currency evaluating device.

138. The method of claim 129 wherein scanning further comprises scanning a substantially continuous segment having a dimension of at least about 29.5 millimeters in a direction transverse to the bill transport path.

139. The method of claim 129 wherein scanning further comprises scanning a substantially continuous segment having a dimension of at least about 59.5 millimeters in a direction transverse to the bill transport path.

5 140. The method of claim 129 wherein scanning further comprises scanning a substantially continuous segment having a dimension of at least about 79.5 millimeters in a direction transverse to the bill transport path.

10 141. The method of claim 129 wherein scanning further comprises scanning a substantially continuous segment having a dimension of at least about 159.5 millimeters in a direction transverse to the bill transport path.

15 142. The method of claim 129 wherein scanning further comprises scanning a substantially continuous segment having a dimension of at least about 170 millimeters in a direction transverse to the bill transport path.

143. The method of claim 129 wherein arranging further comprises arranging the plurality of magnetic sensors in a substantially linear arrangement.

20 144. The method of claim 143 wherein arranging further comprises disposing the linear arrangement of magnetic sensors substantially parallel to the long edge of currency bills being transported along the bill transport.

145. The method of claim 143 wherein arranging further comprises disposing the linear arrangement of magnetic sensors substantially parallel to the leading edge of currency bills being transport along the bill transport path.